

Biosecurity Measures When the Military Comes Home

Dr. Hugh Bailey

Biosecurity Measures When the Military Comes Home

CPT Hugh Bailey

ABSTRACT

U.S. Armed forces deploy to a variety of areas worldwide that contain native arthropods, bacteria, and other agents that can be harmful to American agriculture and animals. The importation of these organisms into virgin environments can have a dramatic impact on the economy and the population. This can be seen by current examples in the world today, including the fruit fly problem in California, the importation of non-native poisonous snakes into Guam, and the spread of the Africanized honeybee into the United States. The military, through its public health and entomology professionals, has an aggressive control program to prevent the importation of these agents into the United States. These measures include medical intelligence gathering prior to deployment, epidemiological monitoring of troops while deployed, cleaning and inspecting personnel and equipment prior to redeployment, and monitoring of personnel upon return to the continental United States.

REFERENCES:

1. Benenson, A.S. 1995. FM 8-33, Control of Communicable Diseases in Man. Washington, D.C.: Department of the Army.
2. Armed Forces Pest Management Board. 1993. Technical Information Memorandum 31: Contingency Retrograde Washdowns – Cleaning and Inspection Procedures. Washington D.C.: Defense Pest Management Information Analysis Center. <http://www.afpmb.org/pubs/tims/tim31.htm>.
3. Armed Forces Pest Management Board. Various. Disease Vector Ecology Profiles. Washington D.C.: Defense Pest Management Information Analysis Center. **Error! Bookmark not defined..**
4. Armed Forces Pest Management Board. 1995. Military Pest Management Handbook. Washington D.C.: Defense Pest Management Information Analysis Center. **Error! Bookmark not defined..**
5. AR 40-5. October 1990. Preventive Medicine. Washington, D.C.: Army Publication and Printing Command
6. AR 40-12. 24 January 1992. Quarantine Regulations of the Armed Forces. Washington, D.C.: Army Publication and Printing Command. http://books.usapa.belvoir.army.mil/cgi-bin/bookmgr/BOOKS/R40_12/COVER.

7. Electronic Training Manual (ETM) 0030. High Mobility MultiPurpose Wheeled Vehicle (HMMWV). Alabama: USAMC Logistics Support Activity.
8. ETM 0036. Tank Recovery Vehicle M578, M88A1. Alabama: USAMC Logistics Support Activity.
9. ETM 0037. Trucks, 2 ½ Ton. Alabama: USAMC Logistics Support Activity.
10. ETM 0038. Heavy Expanded Mobility Tactical Truck (HEMTT). Alabama: USAMC Logistics Support Activity.
11. ETM 0039. Trucks, 5 Ton. Alabama: USAMC Logistics Support Activity.
12. ETM 0040. Carriers, Personnel, M113 Family. Alabama: USAMC Logistics Support Activity.
13. ETM 0042. Heavy Equipment Transport (HET), M911. Alabama: USAMC Logistics Support Activity.
14. ETM 0043. Inf/Cav Fighting Vehicle, M2/M3 Family. Alabama: USAMC Logistics Support Activity.
15. ETM 0069. Tank, M1, M1A1, M1IP. Alabama: USAMC Logistics Support Activity.
16. ETM 0070. Utility Vehicle, CUCV. Alabama: USAMC Logistics Support Activity.
17. ETM 0110. Excavationg/Construction Equipment. Alabama: USAMC Logistics Support Activity.

PREVENTION OF IMPORTATION OF BIOLOGICS DURING MILITARY RETROGRADE OPERATIONS



CPT HUGH BAILEY
1 SFG(A) ENVIRONMENTAL SCIENCE
OFFICER

INTRODUCTION

U.S. Armed forces deploy to a variety of areas worldwide that contain native arthropods, bacteria, and other agents that can be harmful to American agriculture and animals. The importation of these organisms into virgin environments can have a dramatic impact on the economy and the population. This can be seen by current examples in the world today, including the fruit fly problem in California, the importation of non-native poisonous snakes into Guam, and the spread of the Africanized honeybee into the United States. The military, through its public health and entomology professionals, has an aggressive control program to prevent the importation of these agents into the United States. These measures include medical intelligence gathering prior to deployment, epidemiological monitoring of troops while deployed, cleaning and inspecting personnel and equipment prior to redeployment, and monitoring of personnel upon return to the continental United States.

PURPOSE

To outline governing policy, procedures, and techniques used by the U.S. Army to prevent the importation of harmful organisms into the Continental United States (CONUS).

OUTLINE

(1 of 2)

- Introduction
- Purpose
- References
- Governing Documents



OUTLINE

(2 of 2)

- Retrograde Operations
- Summary
- Questions
- Conclusion



REFERENCES

(1 of 3)

- Benenson, A.S. 1995. FM 8-33, Control of Communicable Diseases in Man. Washington, D.C.: Department of the Army.
- Armed Forces Pest Management Board. 1993. Technical Information Memorandum 31: Contingency Retrograde Washdowns – Cleaning and Inspection Procedures. Washington D.C.: Defense Pest Management Information Analysis Center.

REFERENCES

(2 of 3)

- AR 40-5. October 1990. Preventive Medicine. Washington, D.C.: Army Publication and Printing Command
- AR 40-12. 24 January 1992. Quarantine Regulations of the Armed Forces. Washington, D.C.: Army Publication and Printing Command. http://books.usapa.belvoir.army.mil/cgi-bin/bookmgr/BOOKS/R40_12/COVER

REFERENCES

(3 of 3)

- Armed Forces Pest Management Board. 1995. Military Pest Management Handbook. Washington D.C.: Defense Pest Management Information Analysis Center. <http://chppm-www.apgea.army.mil/ento/mpmh/toc.htm>.
- AFPMB. Disease Vector Ecology Profiles. Washington D.C.: Defense Pest Management Information Analysis Center. <http://www.afpmb.org/pubs/dveps/dveps.htm>.

PERSONNEL

- Sanitary Engineers/Environmental Science Officers
- Entomologists
- 91S Preventive Medicine Technicians
- Unit Command Surgeon

GOVERNING DOCUMENTS

- Plant Pest Act
- DoD 4500.35
- DoD 5030.49-R
- AR 40-12
- AR 40-5
- CINC/Surgeon Theater Policy

Pre-Deployment

- Medical Intel/Threat Packet Development
 - AFMIC
 - AFPMB Disease Vector Profile
 - NGO Databases
- Preventive Medicine Annex to OpOrder
- Unit Briefing
- Equipment Selection/Packing

Deployment

- Unit Tracking
 - Epidemiology
 - Operations
 - Intratheater Deployment
 - Host Nation Support
- Coordination with Host Nation for Support
- PM Inspections/Recommendations



Retrograde/Redeployment

(1 of 5)

- Coordination w/USDA (60-90 days)
- Coordination w/Host Nation Facilities
- Issue Directives to Redeploying Units
- Site Reconnaissance/Selection
- Conduct of Retrograde Ops
- Command/Control

Coordination w/USDA

(2 of 5)

- 60 - 90 Days out if possible
- Requirements and Special Considerations
- Approving Authority
- Proponent Organization

Coordination w/Host Nation

(3 of 5)

- Layout and Availability of POE
- Resources available
- Special Regulatory considerations
- Threat Level

Directives to Redeploying Units

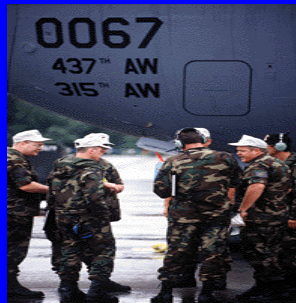
(4 of 5)

- Give commanders a 'heads-up' with time to react to theater requirements
- Normally done 30 days prior to redeployment
- Clarify guidelines and give units a chance to have personnel trained prior to operations

Site Recon and Selection

(5 of 5)

- Should be locked down prior to issuing unit directives
- ESO and inspection team should attend



Site Criteria

(1 of 5)

- Should be sufficient size
- Hardstand if possible, if not, allow for suitable drainage to prevent accumulation of mud and debris
- Designated Inspection, Washing, and Storage Area
- Availability of Fresh Water



Site Criteria

(4 of 5)

- Gray Water Storage/Disposal Capability
- Accessibility/Access Routes
 - To and From Units
 - To and From POE
- Housing Area
- Weather Considerations
- Security



Equipment Requirements

- Raised Wash Area/Inspection Area (Wash Racks are preferred)
- Pressure Washer/Steam Cleaner
- Lights (24 hour operations)
- Power
- Tentage/Warm-Up area





Equipment Requirements

(1 of 2)

- Floodlight set 6
- Cranes as required
- "Y" gates 3
- Fire hose (1 ") 600 feet (2 per wash rack)
- Fire hose (2 ") 200 feet (2 per wash rack)
- Fire nozzles (2 per wash rack)

Equipment Requirements

(2 of 2)

- Pump (55 GPM or greater) 2
- Water truck (5000 gal)
- Steam hose (" l/d, 12 foot lengths) 6
- Steam hose (1 ") 300 feet
- Air compressor 2
- Steam manifold (6 stations)
- Flatbed trucks for movement of supplies as required
- Portable head 2
- Vehicle washracks 4

Recommended Personal Equipment

(1 of 3)

- Cold/Wet weather clothing (assorted sizes) 40 sets
- Hard hats 40
- Straw brooms 40
- Putty knives 200
- Steel rod (5 feet) 12
- Safety goggles 40
- Rubber gloves (assorted sizes) 20 pair
- Flashlights (and batteries) 24

Recommended Personal Equipment

(2 of 3)

- Rubber boots 15 pair
- Water tank (3000 gal) 2
- Wire brushes 100
- Rags as required
- Ear plugs 25
- Garden hose/nozzles 75 feet
- Scrub brushes 100
- Vacuum cleaner (wet/dry) min. 6 as required for aircraft and HUMVEES

Recommended Personal Equipment

(3 of 3)

- RT forklift 4
- Steam Jenny min. 2 as required for aircraft
- Small flat bladed screwdrivers min. 12 for cleaning tracks
- Waterless hand cleaner equivalent of 1 gallon

Site Set-Up/Operation

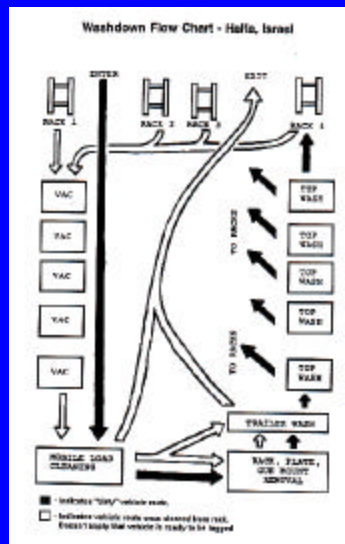
(1 of 2)

- Reception/Staging Area
 - Conduct Inbrief
 - Conduct Refresher Training as Needed
- Administrative Area
- Pre-Wash/BII Download Area

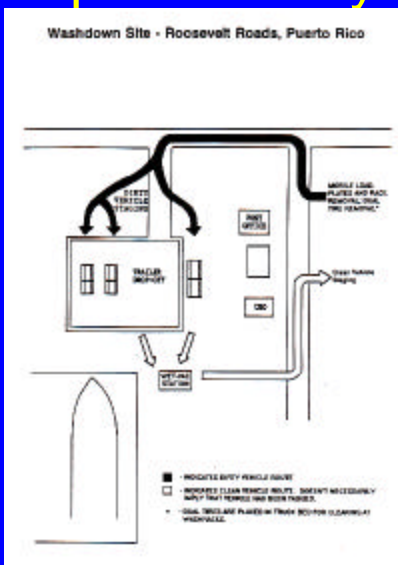
(2 of 2)

- Wash Area/Pre-Inspection
- Inspection Area
- Containment/Shipping Area
- Troop Holding Area

Sample Site Layout



Sample Site Layout





Personnel Requirement

- Site Commander (1)
- Primary Inspectors - 1 per inspection point
- Secondary Inspectors - 1 per washrack
- Admin/Support Personnel as needed

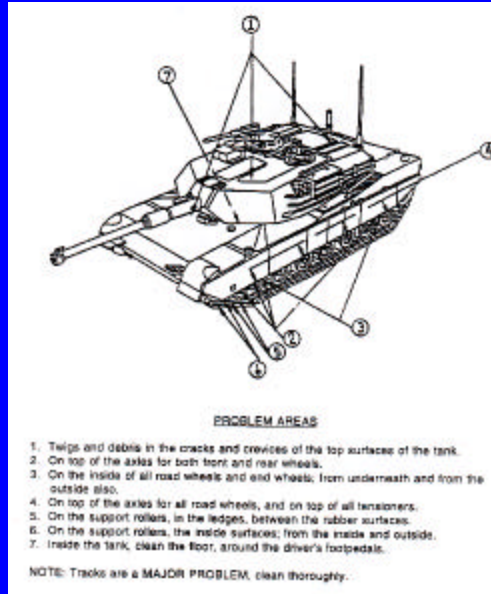
Cleanliness Requirements

- Outlined in TIM 31
 - inspection standards allow only a thin film of road dust on vehicles and equipment at the CONUS final port of entry
- All areas must be cleaned and inspected prior to transportation

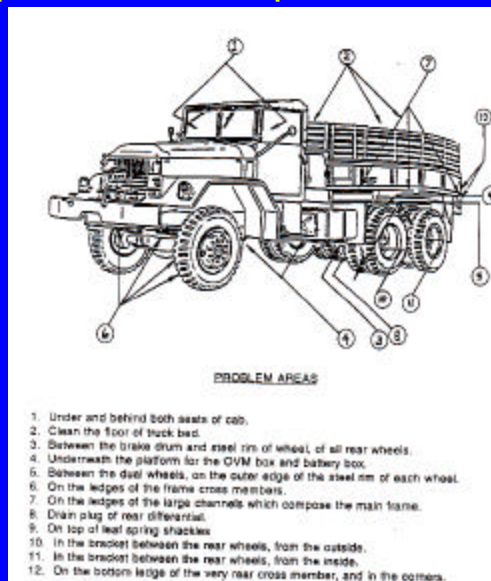
Inspection Procedure

- Outlined in TIM 31 and various Technical Manuals
- Sequence should run top to bottom and not miss any areas
- Once the vehicle is inspected, it is tagged, logged and placed in storage, where it is **not** reused

Sample Vehicle Inspection Guideline



Sample Vehicle Inspection Guideline



Inspection of Personnel

- Check whole baggage for contraband
- Provide personnel with wash facilities and time to clean equipment prior to retrogrades
- Include Team/Unit airloaded equipment

Marking/Log Procedure

- Vehicles marked and logged only if they pass
- Master list along with Memorandum and manifest is sent with convoy commander to POE inspector
- Copy is maintained at inspecting unit

Vehicle Tag

WASHDOWN CLEARANCE

○ VEHICLE #: X215792 TYPE: 17998

DATE: 8 DEC 93 INITIALS: SG

Log/Manifest

#	Vehicle Type	Serial #	Date Inspected	Initials
105	HUMVEE	550370	20 Oct	DL
106	5-Ton	571269	20 Oct	DL
107	Jeep	632848	20 Oct	DL
108	Jeep	620868	20 Oct	DL
109	Jeep	604321	21 Oct	DL
110	P/U Truck	591681	21 Oct	DL
111	5-Ton	563002	21 Oct	DL
112	Jeep - NOT PASSED	551360	Remained on ship	Inspect at Evans
113	LAST ENTRY			
114				
115				

TTPs

- Experience inspectors are essential to success of the operation
- The inspecting unit must have the support of the command
- More time placed into planning = less time needed to conduct the operation

Summary

- Governing Regulations
- Predeployment and Deployment Controls
- Retrograde Operations

????QUESTIONS????

Conclusion

- Military preventive medicine does not end when the mission is completed, it encompasses the entire aspect of operations, to include the prevention of importation of destructive agents into the United States.